

**FACILITY MANAGEMENT PLAN
FOR
UNIVERSAL PROPULSION COMPANY, INC.
PHOENIX, ARIZONA
EPA ID NO. AZD980814479
January 12, 1993**

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I. FACILITY DESCRIPTION:

Universal Propulsion Company, Inc. (UPCO) designs, develops, and manufactures military air craft ejection seats and related components for man-rated escape systems including the required propellants and explosive loaded devices. In addition, UPCO manufactures explosive loaded devices for NASA Space Shuttle Program.

The facility is an Interim Status Facility located at 25401 N. Central Avenue near 7th Street and Happy Valley Road in the north edge of Phoenix, Arizona. UPCO leases this property from the Arizona State Land Department.

Universal Propulsion has an open burning/open detonation pad for the treatment and disposal of waste propellants and initiators. The propellants are RCRA characteristic for reactivity and ignitability and some of the initiators and primers may also be characteristic for lead. The propellants and oxidizers represent a major waste stream of about 75,000 pounds per year and are the major source of visible air emissions at the facility.

A re-alignment of a frontage road changed the distance from the open burning area to the property line, and the facility could no longer comply with the setbacks in 40 CFR 265.382. This regulatory non-compliance was identified by DEQ inspectors in January 1991.

In addition, the original air quality permit for the open burning pad, contained a policy provision that UPCO should develop a better method of propellant disposal.

Because of the setback and air quality issues, UPCO designed and submitted to DEQ for approval a new thermal treatment unit.

UPCO is an interim status facility and is allowed to make certain process changes in accordance with 40 CFR §270.72(a)(3). UPCO has submitted a revised part A and is seeking the Director's approval. The change would be justified on the basis of compliance with federal, state, or local regulations (40 CFR §270.72(a)(3)(ii)).

The approved Thermal Treatment Unit facility will initiate decomposition of the waste propellants and oxidizers by a propane flame. Once started, the process would be sustained by the heat of reaction of a continuous feed of propellant chunks from a conveyor belt. The emissions would be pulled by draft fans through totally enclosed expansion chambers and then exhausted through a bag house. The emissions from the bag house are regulated by an air quality permit.

The treatment unit is not a controlled flame process and would not meet the definition of an incinerator. Instead the unit is designed to provide for deflagration of the propellants. Deflagration is the decomposition of explosives at a rate below the sonic velocity of the material without the need for atmospheric oxygen. No shock waves or detonation should occur in the deflagration process.

II. WORKPLAN

1992

May 20	UPCO submits request for change to Interim Status per 40 CFR 270.72 which would allow the treatment of Hazardous Waste on-site in a Thermal Treatment Unit.
August 18	ADEQ sends comments of deficiencies for proposed Thermal Treatment Unit.
August 19	ADEQ sends comments of deficiencies for revised Part A application
September 10	UPCO submits amended Part A Application.
September 24	UPCO submits requested information and revised plans for Thermal Treatment Unit.
November 13	ADEQ issues approval of the Thermal Treatment Unit process change with several conditions. One condition requires UPCO to submit a amended RCRA part B application within 6 months from the date of receipt of the November 13, 1992 letter.

PROJECTED SCHEDULE

1993

May UPCO submits application amendment.

July ADEQ transmits 1st NOD.

October UPCO submits application amendment.

November ADEQ transmits 2nd NOD.

1994

February UPCO submits application amendment.

March ADEQ deems application complete, drafts permit.

April Draft a HWMA permit circulated for internal comments, draft HSWA permit transmitted to EPA for review.

May Public notice Draft Permits.

June Close of comment period for permits.

July Permits issued.

August Permits are final and effective.

III. ENVIRONMENTAL SIGNIFICANCE

This Thermal Treatment Unit proposal was in response to an inspection performed by the ADEQ Waste Inspection Unit on January 8, 1991. The ADEQ inspections cited inadequate setback requirements from Open Burning/Open Detonation (OB/OD) area to the property line which borders Happy Valley Road (a public road).

In the past years, there have been some complaints from the public about the OB/OD operation. The Thermal Treatment Unit is a more controlled operation and should be safer for the operators, public and the environment. UPCO still wants to utilize its OB/OD area for certain types of waste, such as waste that contains lead. ADEQ recommends that when all the bugs are worked out of the operation of this TTU, that UPCO study the feasibility of treating all of its waste in the TTU.